

Appl. No. 10/601,783
Amdt. dated March 10, 2005
Reply to Office action of December 17, 2004

AMENDMENTS TO THE CLAIMS

Claim 1 (currently amended): A method for controlling an operating temperature of a computer system, the method comprising:

- 5 monitoring a rotational speed of at least a cooling fan of the computer system,
 the rotational speed of the cooling fan being controlled by a fan power;
 monitoring a vital temperature of the computer system;
 calculating a change in the vital temperature; and
 setting the fan power based on the calculated change in the vital temperature;
10 wherein when the change in the vital temperature is negative, the fan
 power is reduced to reduce the fan rotational speed; and when the change
 in the vital temperature is positive, the fan power is increased to increase
 the fan rotational speed[.];
 wherein setting the fan power further comprises:
15 maintaining the fan power when the vital temperature increases and the vital
 temperature is below a set temperature;
 maintaining the fan power when the vital temperature remains constant and the
 vital temperature is above the set temperature; and
 decreasing the fan power by a third power when the vital temperature remains
20 constant and the vital temperature is below the set temperature.

Claim 2 (original): The method of claim 1 wherein setting the fan power further comprises:

- 25 increasing the fan power by a first power when the vital temperature increases
 by a first temperature, the first power being directly proportional to the
 first temperature.

Claim 3 (original): The method of claim 1 wherein setting the fan power further comprises:

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decreasing the fan power by a second power when the vital temperature decreases by a second temperature, the second power being directly proportional to the second temperature.

5 Claim 4 (cancelled)

Claim 5 (original): The method of claim 4 further comprising resetting the fan power to a fixed fan power corresponding to a fixed fan speed when the set fan speed differs from the fixed fan speed and the vital temperature differs from the set temperature by
10 at least a predetermined amount.

Claim 6 (original): The method of claim 1 further comprising detecting a cooling fan maximum rotational speed and a corresponding maximum fan power such that setting the fan power is according to a percentage of the cooling fan maximum rotational
15 speed.

Claim 7 (original): The method of claim 1 wherein the at least a cooling fan includes a CPU cooling fan of a CPU of the computer system and an auxiliary cooling fan of the computer system, and the vital temperature is obtained from an on-die thermal
20 monitoring transistor of the CPU.

Claim 8 (original): The method of claim 1 wherein the cooling fan is a power supply cooling fan of a power supply of the computer system, and the vital temperature is obtained from an on-die thermal monitoring transistor of the CPU.
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Claim 9 (original): The method of claim 1 wherein the at least a cooling fan includes a CPU cooling fan of a CPU of the computer system, an auxiliary cooling fan of the computer system, and a power supply cooling fan of a power supply of the computer system, and the vital temperature is obtained from an on-die thermal monitoring

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transistor of the CPU.

Claim 10 (original): The method of claim 1 wherein setting the fan power is controlled by
a relation stored in a random access memory or hard disk and accessible by an
5 operating system during an operating system execution of the computer system.

Claim 11 (original): The method of claim 1 wherein setting the fan power is controlled by
a relation stored in a BIOS memory and accessible by a BIOS of the computer system
during a POST or boot of the computer system.

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Claims 12-19 (cancelled)

Claim 20 (currently amended): A method for controlling an operating temperature of a
computer system, the method comprising:

15 monitoring a rotational speed of a cooling fan installed in a power supply of the
computer system, the rotational speed of the cooling fan being controlled
by a fan power;

monitoring a vital temperature of the computer system;

calculating a change in the vital temperature; and

20 setting the fan power according to the calculated change in the vital temperature
to control the rotational speed of the power supply cooling fan[.];

wherein setting the fan power further comprises:

maintaining the fan power when the vital temperature increases and the vital
temperature is below a set temperature;

25 maintaining the fan power when the vital temperature remains constant and the
vital temperature is above the set temperature; and

decreasing the fan power by a third power when the vital temperature remains
constant and the vital temperature is below the set temperature.

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Claim 21 (original): The method of claim 20 wherein setting the fan power further comprises:

5 increasing the fan power by a first power when the vital temperature increases by a first temperature, the first power being directly proportional to the first temperature.

Claim 22 (original): The method of claim 20 wherein setting the fan power further comprises:

10 decreasing the fan power by a second power when the vital temperature decreases by a second temperature, the second power being directly proportional to the second temperature.

Claim 23 (cancelled)

15 Claim 24 (original): The method of claim 23 further comprising resetting the fan power to a fixed fan power corresponding to a fixed fan speed when the set fan speed differs from the fixed fan speed and the vital temperature differs from the set temperature by at least a predetermined amount.

20 Claim 25 (original): The method of claim 20 further comprising detecting a cooling fan maximum rotational speed and a corresponding maximum fan power such that setting the fan power is according to a percentage of the cooling fan maximum rotational speed.

25 Claim 26 (original): The method of claim 20 wherein the vital temperature is obtained from an on-die thermal monitoring transistor of a CPU of the computer system.

Claim 27 (original): The method of claim 20 wherein setting the fan power is controlled by a relation stored in a random access memory or hard disk and accessible by an

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operating system during an operating system execution of the computer system.

Claim 28 (original): The method of claim 20 wherein setting the fan power is controlled by a relation stored in a BIOS memory and accessible by a BIOS of the computer system during a POST or boot of the computer system.

Claims 29-34 (cancelled)

Claim 35 (previously presented): A method for controlling an operating temperature of a computer system, the method comprising:
monitoring a rotational speed of at least a cooling fan of the computer system, the rotational speed of the cooling fan being controlled by a fan power;
monitoring a vital temperature of the computer system; and
setting the fan power based on a change in the vital temperature; wherein when the change in the vital temperature is negative, the fan power is reduced to reduce the fan rotational speed; and when the change in the vital temperature is positive, the fan power is increased to increase the fan rotational speed;
wherein setting the fan power further comprises:
maintaining the fan power when the vital temperature increases and the vital temperature is below a set temperature;
maintaining the fan power when the vital temperature remains constant and the vital temperature is above the set temperature; and
decreasing the fan power by a third power when the vital temperature remains constant and the vital temperature is below the set temperature.

Claim 36 (previously presented): The method of claim 35 further comprising resetting the fan power to a fixed fan power corresponding to a fixed fan speed when the set fan speed differs from the fixed fan speed and the vital temperature differs from the set temperature by at least a predetermined amount.

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Claim 37 (previously presented): A method for controlling an operating temperature of a computer system, the method comprising:

- 5 monitoring a rotational speed of a cooling fan installed in a power supply of the computer system, the rotational speed of the cooling fan being controlled by a fan power;
- monitoring a vital temperature of the computer system; and
- setting the fan power according to the vital temperature to control the rotational speed of the power supply cooling fan;
- 10 wherein setting the fan power further comprises:
- maintaining the fan power when the vital temperature increases and the vital temperature is below a set temperature;
- maintaining the fan power when the vital temperature remains constant and the vital temperature is above the set temperature; and
- 15 decreasing the fan power by a third power when the vital temperature remains constant and the vital temperature is below the set temperature.

Claim 38 (previously presented): The method of claim 37 further comprising resetting the fan power to a fixed fan power corresponding to a fixed fan speed when the set fan

20 speed differs from the fixed fan speed and the vital temperature differs from the set temperature by at least a predetermined amount.